

FLOOD RISK ASSESSMENT REPORT

AT

**HOLGATE SCHOOL/SR GENT SITE
BARNSELY**

ON BEHALF OF

GL HEARN LIMITED



Report No.

1045/01

FLOOD RISK ASSESSMENT REPORT

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GL HEARN LIMITED

JANUARY 2009

ARP ASSOCIATES

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1.0 INTRODUCTION

- 1.1 Barnsley Metropolitan Borough Council Education Department are proposing to redevelop the sites of the existing Holgate and Kingstone Schools, Barnsley by relocation on the site of the existing Holgate school, playing fields and the former SR Gent factory in Barnsley. As part of the Application for planning approval for the development, it was considered appropriate for a Flood Risk Assessment Report to be prepared.
- 1.2 It is within the general strategy of the Country for development in areas where there is a risk of flooding to be fully assessed to avoid unnecessary increase in the requirement of flood defence. Under Planning Policy Statement PPS25 "Development and Flood Risk", consultation should be undertaken with the Environment Agency, Land Drainage Authority and Water Authority and a Flood Risk Assessment Report should be prepared considering the development proposals.
- 1.3 ARP Associates have been appointed to carry out an assessment of the site, implement appropriate consultations and prepare a Flood Risk Assessment Report, in accordance with PPS25, to satisfy the requirements of the Planning Authority.
- 1.4 The consultations and walkover survey have been carried out in January 2009.

2.0 WALKOVER SURVEY

General

2.1 The site, which is centred on Ordnance Survey Grid Reference SE333 061 forms part of the existing Holgate school building and playing fields, and the former SR Gent factories and existing petrol station to the northwest. The site can be clearly formed into three distinct areas involving the existing school to the eastern boundary, the main playing fields in the central part of the site and the former SR Gent factories and petrol station to the northwest. The site is irregular in shape and has a total area of 16.55 hectares.

2.2 A site location plan is presented in Appendix A.

Central Playing Fields

2.3 Current Use and Topography

The central part of the site has a general fall from west to east with distinct terracing, several metres in height, to form level playing surfaces throughout this area of the site. The fields are also raised above the western boundary and have probably been terraced using imported material. All the area has a grassed finish and there is no vegetation in the main part of the site.

2.4 Boundaries

All the boundaries to this part of the site are formed by a steel security fence with some mature and semi-mature bushes and trees particularly on the western boundary. There is a warehouse to the southwest, a sports ground to the south, new housing to the southwest and existing housing and allotment gardens to the north. The former SR Gent factory site is adjacent to the northwestern boundary, although there is an area of unallocated rough grassland with a public footpath in-between. The eastern boundary is open and formed by the school buildings and artificial playing surfaces.

2.5 Drainage

There is no indication of positive drainage on this part of the site, and it is known that there is a former tip in the vicinity which is likely to be filled with permeable materials and allow infiltration of surface water.

Holgate School

2.6 Current Use and Topography

The most westerly part of this site is formed by artificial playing surfaces for athletics, tennis and football, inside purpose built metal fenced "cages". The remaining area to the east contains numerous school buildings and hardstanding yard areas, which are set much lower than the playing surface area, but which also slopes from west to east. The only indication of vegetation on the site is on the slope between the playing surfaces and the school where there are several mature trees on the banking.

2.7 Boundaries

The boundaries to the school are again formed generally by steel security fencing, but brick walls form the eastern and part of the southern boundaries. There is very little evidence of vegetation outside the boundaries. The southern boundary is adjacent to a sports club, whilst the northern boundary has allotment gardens. Shaw Lane abuts the far eastern boundary, whilst the playing fields form the open western boundary. It should be noted that Shaw Lane is below the level of the main school building.

2.8 Drainage

There is clear evidence of positive drainage to all the school buildings around the site and in the school yard areas. There are numerous individual gullies and the Facilities Manager for the school has identified that there is a positive drainage system which falls

from west to east in two carrier drains and discharges to sewers in Shaw Lane. The foul and surface water drainage systems have separate connections into the sewers. There are several manholes around the site, clearly indicating the positive drainage which is present within the school premises. There is also evidence of manhole covers and gullies within the main Shaw Lane highway, and one of the manhole covers is directly in line with the entrance to the school building, indicating that there is a pipe connection from the site into the sewer at this location.

SR Gent and Petrol Station Site

2.9 Current Use and Topography

The factories and former buildings on the SR Gent site have now been demolished, but all the concrete floor hardstandings and hard-paved external areas remain on the site. The Shell Petrol Station fronting onto the Dodworth Road to the north is still in operation. The site is flat, but is set lower than the surrounding boundaries on all sides. There is no vegetation, apart from a mound in the southwestern corner with some small shrubs and bushes present. The garage on the northern boundary is higher than the SR Gent site and flush with levels on Dodworth Road.

2.10 Boundaries

The site is located within a former quarry and there are vertical stone faces to the northeastern and southern boundaries, although the quarry does extend beyond the site boundary to the east. There is also a slight rise in level on the western boundary, although this is not as pronounced as the other boundaries. There is a post and chain-link fence around much of this part of the site, particularly on the western and southern boundaries, whilst there is a steel security fence on the eastern boundary. There is residential development to the east and west, the playing fields to Holgate School to the south and southeast, whilst Dodworth Road forms the northern boundary to the petrol station, with a recreation ground and residential development beyond.

2.11 Drainage

There is evidence of gullies on the hardstanding areas, but it is not possible to now confirm that the buildings had a positive drainage system. However, it is almost certain that this would have drained to positive sewer, probably into Dodworth Road. The petrol station has evidence of rainwater downpipes on the buildings and gullies on the forecourt and this is believed to discharge into sewers on Dodworth Road.

3.0 ENVIRONMENT AGENCY CONSULTATION

- 3.1 A consultation was requested from the Environment Agency and a copy of their e-mail response, Reference RIF/2008/7670 dated 16th January 2009, is presented in Appendix B for reference purposes.
- 3.2 The Agency have confirmed that the site is outside the floodplain and, whilst not stated, it is assumed that this means the site falls within Flood Zone 1 in accordance with PPS25.
- 3.3 The nearest watercourse is approximately 300m from the site and falls under the responsibility of the Land Drainage Authority for maintenance and records relating to flooding. Recommendation is made to contact the Land Drainage Authority.
- 3.4 The Agency have confirmed that there should be no increase in surface water run-off from the new development. If the site is designated as brownfield, then they would expect surface water from the redeveloped site to be reduced by a minimum of 30% from the existing rate. Greenfield development sites should balance surface water discharge to the 1 in 100 year greenfield run-off rate, which is considered to be 5l/s/ha.
- 3.5 Sustainable Drainage Systems should be used wherever possible to tackle surface water run-off problems at source.

4.0 WATER AUTHORITY CONSULTATION

- 4.1 A consultation was requested from Yorkshire Water, who are the Land Drainage Authority for this area, and a copy of their response, Reference J010674 dated 9th January 2009, is presented in Appendix C for reference purposes.
- 4.2 There are a 525mm diameter public surface water sewer and a 225mm diameter public combined sewer crossing the site. These are located in the far northwestern corner of the proposed development. No buildings are to be erected within 4m or trees planted within 5m of these public sewers. Furthermore, it may not be acceptable to raise or lower ground levels over the sewers and if any diversion is required, then this will be undertaken in accordance with Section 185 of the Water Industry Act 1991.
- 4.3 Foul water should discharge to the 225mm diameter public combined sewer crossing the site and the 225mm diameter public combined sewer in Shaw Lane. Any foul water from kitchens and/or food preparation areas of restaurants and/or canteens etc must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.
- 4.4 In respect of surface water, reference is made to Requirement H3 of Building Regulations 2000 and Sustainable Drainage Systems.
- 4.5 The local public sewer network does not have capacity to accept any additional discharge of surface water from the proposal site. Surface water discharge will be restricted to the level of run-off that exists at the present time, and discharge from the proposed site shall have similar rates of flow and/or measured areas discharging to similar points of connection. It will be necessary to demonstrate the positive drainage to the public sewer by assessing drainage layouts with pipe sizes, gradients and connection points etc.
- 4.6 However, surface water may discharge to the 525mm diameter public surface water sewer crossing the site, and the 225mm diameter public surface water sewer recorded in Shaw Lane.

- 4.7 Surface water run-off from communal parking areas (i.e. greater than 800m² or more than 50No. car parking spaces), will need to pass through an oil, petrol and grit interceptor/separator of adequate design before discharge to the public sewer network. Roof water should not pass through the traditional stage or full retention type interceptor/separator.

5.0 LAND DRAINAGE AUTHORITY CONSULTATION

- 5.1 A consultation was requested from Barnsley Metropolitan Borough Council, who are the Land Drainage Authority for this area, and a copy of their response, Reference EMDRD/SK dated 24th December 2008, is presented in Appendix D for reference purposes.
- 5.2 The Authority have no record of any flooding issues associated with this site and confirm that it is not affected by any flooding from major watercourses in the area.
- 5.3 The Authority have no geological information of the site and cannot comment on the suitability of soakaways for the proposed development. However, this must be considered within the preparation of any flood risk assessment.
- 5.4 There is no record of any culverted or open watercourse crossing the site and refer to the nearest watercourse being approximately 200m to the northeast. However, the site is not in the natural catchment area of this watercourse, and do not consider this to be an appropriate discharge point for surface water from the development.

6.0 MATERIAL CONSIDERATION IN RESPECT OF PPS25

Flood Classification

- 6.1 The Environment Agency have confirmed that the site is located outside any flood zone. In accordance with Table D.1 'Flood Zones' in Annex D of PPS25, the site is considered to fall within Zone 1, low probability, which comprises land assessed as having less than a 1 in 1000 annual probability of river or sea flooding in any year (less than 0.1%).

End Use Classification

- 6.2 The site is proposed as a new school, combining 2No. existing schools, with associated playing fields. A plan showing the indicative layout of the new development is presented in Appendix E.
- 6.3 In Table D.2 'Flood Risk Vulnerability Classification' in Annex D of PPS25, the end use of the development can be considered to be 'More Vulnerable'.

Sequential Test

- 6.4 When the Flood Zone 1 classification is considered with a 'More Vulnerable' end use in accordance with Table D.3 'Flood Risk Vulnerability and Flood Zone Compatibility' of Annex D of PPS25, this shows that the Sequential Test has been satisfied and there is no requirement for the Exception Test to be implemented.

Flood Sources

- 6.5 Flooding can occur at any time from a wide variety of locations and sources and also from different combinations of weather sources, rainfall patterns, local topography and patterns of development. The various sources are identified as follows:-

River and the Sea

- 6.6 There are no flooding sources identified from rivers, watercourses or the sea at this particular location.

Land

- 6.7 Flooding often occurs from intense rainfall which is unable to soak into the ground or enter into drainage systems. It will be necessary to ensure that there is a positive drainage system on the site which can accommodate the appropriate level of storm within the drainage system. Associated playing fields will need to have land drainage or ensure that water soaks into the ground as exists at the present time.

Groundwater

- 6.8 The proposed site is situated near to the top of a hill to the west of Barnsley City Centre, and part of the new development site is located on a backfilled quarry. There is no indication of a high water table, and any flooding from this source is highly unlikely.

Sewers

- 6.9 In the event of a blocked or under designed sewer, water may well backup the system and come out of the lowest surface point, at possibly a gully or manhole cover. Water will then flow overland, and it is important to determine an overland flood route if this occurs to ensure that buildings are protected from flooding.

Reservoirs, Canals and other Artificial Sources

- 6.10 There are no reservoirs, canals or lakes retaining water above natural ground level at this location, and flooding from this source will not affect the development.

Flood Mitigation

- 6.11 There are no specific flood prevention measures required for the new development, as the risk from flooding from rivers, watercourses and other similar sources is low. However, consideration needs to be given in the event of flooding from a blocked or under-designed sewer, or from intense rainfall, which surcharges the drainage system. In these circumstances, it will be necessary to prepare a plan showing the route of any flood water, and where this discharges to land away from buildings. Furthermore, it will be necessary to ensure that the finished floor levels to the proposed buildings are raised a minimum 300mm, wherever possible, above the adjacent ground level, to provide a temporary 'storage' area for any water of this nature which may potentially flood the site.
- 6.12 The existing and proposed playing fields will need to be designed with free draining material or ensure an adequate land drainage system is installed to prevent excessive overland water flows.

Climatic Change

- 6.13 Annex B of PPS25 indicates that winters will become wetter over the whole of the UK, by as much as 20% by the 2050s. A shift in the seasonable pattern of rainfall is also expected, with summers and autumn becoming much drier than at present. In making an assessment of the impact of climatic change on flooding from land, rivers and sea, Table B.2 indicates that the peak rainfall intensity for developments likely to extend to between 2055 and 2085 is 20% and peak river flow between 2025 and 2115 is also expected to rise by 20%. If development is expected to extend past 2085, then a 30% peak rainfall intensity should be considered.
- 6.14 The surrounding areas to much of the proposed school site is a built up residential area which has positive drainage systems, and will prevent any water run-off into the site from adjacent boundaries. The area of land to the southeast is formed by the playing fields to the school, but as land falls generally from west to east there will be no water run-off into the site from outside the site boundaries. If levels do indicate a slope falling back into the

site, then it will be necessary to provide a cut-off drain at the bottom of any incoming slope to prevent water from flowing into the site. This can only be determined by levels after the design of the new development.

- 6.15 As there will be no incoming water into the site from outside the site boundaries, only rainfall falling within the site will need to be considered for climatic change. The latest published figures in PPS25 show that around 20% increase in rainfall will occur over a 50 year period for the life of the school, and it will be necessary to ensure that any positive drainage system is designed with a capacity to accommodate this increase in rainfall to satisfy climatic change requirements.

Sustainable Drainage

- 6.16 Whilst there has been no intrusive investigation on the site, a desk study appraisal, prepared by ARP Geotechnical Ltd, under Reference GLH/01 dated January 2009, identified that the site is underlain by an unnamed sandstone of the Middle Coal Measures of the Upper Carboniferous Period. There is also a coal seam (the Barnsley Coal) running north northwest, south southeast through the western half of the site, where the proposed school building is located. To the west of the seam, undifferentiated strata are shown in a narrow band, with another narrow band of sandstone, then undifferentiated strata beyond. There is also a fault close to the northern boundary of the site. It is anticipated that the upper few metres of the natural strata will be weathered to granular and cohesive subsoil, and that there is a deep fill area of a former clay pit, a coal seam outcrop and imported fill materials, possibly contaminated, on the playing fields. The conclusion of the investigation was that permeable Sustainable Drainage solutions, such as soakaways or swales, are unlikely to be suitable. This was due to the possible discharge of water to unacceptable underground strata, such as coal seams or mined areas, weathered cohesive subsoils, the backfilled clay pit and potential contamination.
- 6.17 It is considered that Sustainable Drainage solutions are not appropriate for surface water discharge in this particular instance.

Surface Water Drainage

- 6.18 It is a requirement to ensure that surface water run-off from any proposed development has negligible consequence on downstream areas either in sewer capacity or discharge to watercourse.
- 6.19 The Land Drainage Authority have confirmed that the nearest watercourse is 200m to the northeast and that the site does not fall within the catchment. Therefore, there are no suitable watercourse outfalls for surface water discharge, in accordance with Requirement H3 of Building Regulations 2000.
- 6.20 The original SR Gent Factory and hardstanding areas have been demolished in recent years, but the hardstanding concrete floor bases to the buildings and the hardstanding external areas are still present, and there is a positive drainage system on the site. There are no drainage plans available of this system and no investigation has been carried out. However, it is clear that the system will have discharge to the surface water sewer crossing through the site, and it is considered reasonable to utilise this outfall for the new development. It would be advisable for an investigation to be carried out to confirm this arrangement, but Yorkshire Water are accepting that discharge to the 525mm diameter public surface water sewer on the site is acceptable for the new development. It is also known that the school and yard areas have a positive drainage system direct to the sewer in Shaw Lane.
- 6.21 A plan of the existing layout is presented in Appendix F and indicative calculations show that the existing impermeable areas on the SR Gent site equates to approximately 33,750m², and this would have positive drainage system to the development. The existing school and yard areas have an impermeable area of approximately 14,850m².
- 6.22 The impermeable area of the proposed school, drive and hardstanding areas, as shown on the plan presented in Appendix E, equates to an area of approximately 30,000m². This is some 38% less than the total existing run-off and satisfies the requirements of the Environment Agency to reduce the amount of discharge into the public sewer network on

brownfield sites. Therefore, provided the proposed drainage system for the new development accommodates a 20% increase of rainfall to ensure future climatic change, then this can outfall to the existing sewer location without restriction to discharge.

- 6.23 Surface water run-off from the proposed car park will need to pass through a petrol interceptor of adequate design before connection to the public sewer.

Foul Water Drainage

- 6.24 Foul water from the new development can connect to the 225mm diameter combined sewer crossing the northwestern corner of the site.
- 6.25 Foul water discharge from kitchens or food preparation areas will need to pass through a grease trap of adequate design before connection to the public sewer.

Emergency Egress

- 6.26 It is a requirement under Planning Policy Statement PPS25 that occupants should be able to egress any building during times of flood, without being trapped by flood conditions.
- 6.27 As there is very little risk of flooding on the site from watercourses or rivers, and the Environment Agency have confirmed that the annual probability of flooding is less than 0.1%, and any flooding from blocked sewers will only be a few millimetres thick over a relatively large area, then there are no special mitigation measures required for emergency egress during times of flood for the proposed development.

7.0 SUMMARY

- 7.1 The site passes the Sequential Test of PPS25 and there are no flood mitigation measures required for the new development.
- 7.2 To address possible flooding in the event of a blocked or under designed sewer, it is recommended that floor levels of the proposed buildings are raised 300mm, wherever possible, above the external ground levels.
- 7.3 Any sloping ground into the site on the boundaries shall include cut-off drains to prevent overland flood water entering the development site.
- 7.4 Any surface water drainage system shall accommodate an increased 20% capacity to allow for climatic change over the life of the development. Surface water run-off from parking areas shall pass through a petrol interceptor.
- 7.5 The existing surface water drainage system shall be investigated and the outfall proved for the original factory site in the northwest corner, and calculations and details submitted to the Planning Authority of the proposed drainage outfall details, showing agreed reduction in discharge, for approval prior to construction on site.
- 7.6 An overland flood route shall be prepared and issued to the Planning Authority for approval prior to construction on site.
- 7.7 There are no special requirements for emergency egress for the proposed development.
- 7.8 Foul water drainage from kitchens and/or food preparation areas shall pass through a grease trap.
- 7.9 The proposed site and end use satisfies the requirements of Planning Policy Statement PPS25 'Development and Flood Risk', subject to compliance with the above.

APPENDIX A

SITE LOCATION PLAN



Project

HOLGATE/KINGSTONE ALC, BARNSELEY

Client

G. L. HEARN LTD

Title

SECTIONS OF SITE



ARP ASSOCIATES
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Amendment

Chk

Date JAN 09

Scale 1: 10,000 @ A3

Drawn MW

No

1045/01/FR.02

Rev

Chk. ARP

APPENDIX B

ENVIRONMENT AGENCY CONSULTATION

Allan Poyser

From: Andrew Radcliffe
Sent: Monday 19 January, 2009 8:27 am
To: Allan Poyser
Subject: FW: Your Enquiry: RIF/2008/7670

-----Original Message-----

From: Beech, Cheryl [mailto:Cheryl.Beech@environment-agency.gov.uk]
Sent: 16 January 2009 3:03 pm
To: Andrew Radcliffe
Subject: Your Enquiry: RIF/2008/7670

Our Ref: RFI/2008/7670

Your Ref: 1045/01/ARPjc

Dear Sirs

**RE: Holgate/Kingston Advanced Learning Centre
Former SR Gent Site and Shell Petrol Station, Barnsley**

Thank you for your enquiry dated 22nd December 2008.

The nearest watercourse approximately 300m from the site is classified as an ordinary watercourse, as defined under the terms of the Land Drainage Act 1991, and as such we have no powers under the aforementioned Act to carry out improvement works to the watercourse. The local authority would have any information concerning the history of the watercourse and as the responsible drainage authority for the watercourse may be able to advise further.

Whilst the site is outside the floodplain, any development over a hectare could generate significant volumes of surface water. A flood risk assessment must be submitted with a planning application on any proposed development over 1ha to assess the existing and proposed surface water drainage from the site. There should be no increase in surface water runoff from the new development. If the existing site is designated as brownfield, then we would expect surface water from the re-developed site to be reduced by a minimum of 30% from the existing rate. Greenfield development sites should balance surface water discharge to the 1 in 1 year Greenfield run-off rate, this is considered to be 5 l/sec/ha.

Sustainable Urban Drainage techniques (SUDs) tackle surface water run-off problems at source using features such as soakaways, permeable pavements, grassed swales, infiltration trenches, ponds and wetlands to attenuate flood peak flows, produce water quality improvements and environmental enhancements. We would seek to promote the use of SUDs techniques to the site when it is developed and would expect any potential developer of the site to submit detailed information indicating that the use of SUD's has been fully explored. For more information on SUD's can be found at: <http://www.ciria.org.uk/suds/>

This information is based on data that is currently available to the Environment Agency and is subject to our standard notice. The Agency accepts no liability for any loss or damage arising from its use. The interpretation of the information is your responsibility.

19/01/2009

If you require any further help, please do not hesitate to contact me.

Yours sincerely,

Stacey Riley
External Relations Officer

Direct Dial 0113 395 4506
Fax 0113 213 4609

Email: Stacey.Riley@environment-agency.gov.uk

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19/01/2009

APPENDIX C

WATER AUTHORITY CONSULTATION

YorkshireWater

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RECEIVED

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Bradford
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Tel: (0845)1242424
Fax: (01274) 372 834

For the attention of Mr A Poyser

1045/01
Email:
Planning.Sewerage@yorkshirewater.co.uk

Your Ref: 1045/01
Our Ref: J010674

For telephone enquiries ring:
Kashif Khan on (0845)1242424

9th January 2009

Dear Sirs,

Holgate School, Dodworth Road, Barnsley - Pre-Planning Sewerage Enquiry : School Development

Thank you for your enquiry of 19th December 2008. Our charge of £80.00 (plus VAT) will be added to your account with us, reference ARP013. You will receive an invoice for your account in due course.

Please find enclosed a complimentary extract from the Statutory Sewer Map. This indicates the recorded position of the public sewers. The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site:

There are 525 mm diameter public surface water sewers and a 225 mm diameter public combined sewer recorded crossing the site. No buildings are to be erected within 4 (four) metres, nor trees planted within 5 (five) metres of these public sewers. It may not be acceptable to raise or lower ground levels over the sewers, nor to restrict access to the manholes on the sewers. If you wish to have these sewers diverted under Section 185 of the Water Industry Act 1991 an application should be made in writing. To discuss this matter, please telephone 0845 124 24 24.

Development of the site should take place with separate systems for foul and surface water drainage. The separate system should extend to the public sewer.

Foul water should discharge to the 225mm diameter public combined sewer recorded crossing the site near Dodworth Road and the 225 mm diameter public combined sewer recorded in Shaw Lane, at a point adjacent to the eastern boundary of the site. Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

From the information supplied, it is not possible to determine if the site is low-lying relative to the location of the public sewer network. If the ground level of a site or the level of any basement is below the ground level of the point of connection to a public sewer, the developer may have to take precautions to prevent the risk of flooding of the site from surcharge of the public sewer network. Such precautions may include raising the level of the site, having pumped discharges from the site and/or the installation of anti-flooding valves.

The developer's attention is drawn to Requirement H3 of the Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SUDS), for example the use of soakaways and/or permeable hardstanding etc., may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SUDS in this instance from the appropriate authorities.

Where appropriate, soakaways, swales and infiltration trenches (SUDS) may be adopted as part of the public sewer network. For general conditions for the adoption of SUDS please see the attached sheet. Further information may be seen in the DEFRA publication 'Interim Code of Practice for Sustainable Drainage Systems' (ISBN 0-86017-904-4). If the developer is considering adoption of SUDS he should contact our New Development Team at Sheffield on 0845 124 24 24.

The local public sewer network does not have capacity to accept any additional discharge of surface water from the proposal site. The developer is advised to contact the Environment Agency/local Land Drainage Authority with a view to establishing a suitable watercourse (if any nearby) for discharge.

Surface water discharges to the public sewer will be restricted to the level of run-off - i.e. same rate of discharge - to that from the existing use of the site. To maintain the "status quo" in the public sewer network, any discharge of surface water from the site should take place with similar rates of flow and/or measured areas discharging to similar points of connection to that of the existing use of the site. You will need to demonstrate positive drainage to the public sewer to Yorkshire Water by means of investigation and calculation carried out at your expense.

To do this, Yorkshire Water requires to see previous drainage layouts with pipe sizes, gradients and connection points, proposed drainage layouts with pipe sizes, gradients and connection points, measured impermeable areas of the present use of site and the proposed use of site, along with the calculations that show the previous discharge rate from the site to the public sewer and the proposed discharge rate from the site to the public sewer.

Alternatively, surface water may discharge to the 525mm diameter public surface water sewer recorded crossing the site near Dodworth Road and the 225 mm diameter public surface water sewer recorded in Shaw Lane, at a point adjacent to the site.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Surface water run-off from communal parking (greater than 800 sq metres or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.

Prospectively adoptable sewers must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our New Development Team at Sheffield (telephone 0845 124 24 24) for further information.

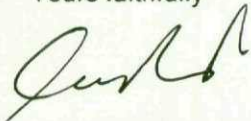
The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. Land drainage will not be allowed into a public sewer. Highway drainage, however, may be accepted under certain circumstances; for instance, if SUDS are not a viable option and there is no highway drain available and if capacity is available within the public sewer network. In this event, the developer will be required to enter into a formal agreement with Yorkshire Water Services under Section 115 Water Industry Act 1991 to discharge non-domestic flows into the public sewer network.

Any new connection to an existing public sewer will require the approval of Yorkshire Water. You may

obtain an application form by telephoning 0845 124 24 24.

All the above comments are based upon the information and records available at the present time. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours faithfully



New Development Team

cc:

APPENDIX D

LAND DRAINAGE AUTHORITY CONSULTATION



BARNSLEY
Metropolitan Borough Council

Highways and Engineering

Assistant Director: D. A. Richardson , BSc, M.C.I.O.B, M.I.H.T.
PO Box 601 Barnsley S70 9FA

My Ref. EMDRD/SK

Your Ref. 1045/01/ARPjc

Enquiries to Mr. S. Kilner

Dial Direct (01226)772116

Fax (01226)772196

Date 24th December, 2008

Dear Sir

Holgate/Kingstone Advanced Learning Centre
Former SR Gent Site and Shell Petrol Station, Dodworth Road, Barnsley

I refer to your letter dated 19th December, 2008 and would respond to the points raised as below.

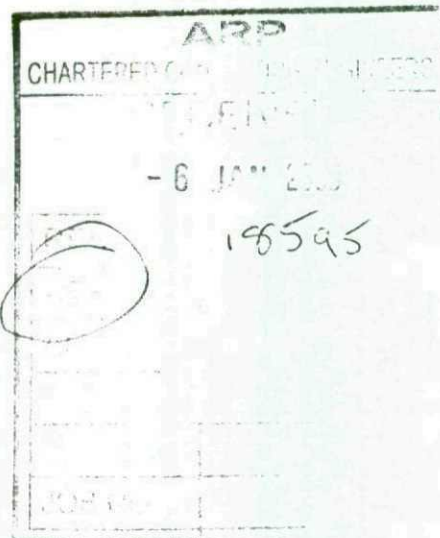
1. I have no record of any flooding issues associated with this site, and would confirm that to my knowledge it is not affected by any flooding from major watercourses in the area.
2. I regret I have no geological information for the site, so the suitability of the strata for soakaways would need to be explored following the appropriate percolation tests. The use of soakaways or other sustainable urban drainage techniques will need to be explored thoroughly as part of the preparation of any flood risk assessment which must be carried out in accordance with Planning Policy Statement No.25.
3. My Council have no records of any culverted or open watercourses crossing the site. The only watercourse I am aware of in this area is located approximately 200 metres north east of your site adjacent to the main Barnsley to Huddersfield railway line. The site is not in the natural catchment area of this watercourse, so I do not consider it to be an appropriate discharge point for surface water for any development.

I would recommend that you also consult the Environment Agency with respect to this site.

Yours Faithfully

Mr S. Kilner
Principal Engineer Drainage.

F.a.o. Mr. A R Poyser,
ARP Associates
5/6 Northwest Business Park
Servia Hill
LEEDS
LS6 2QH

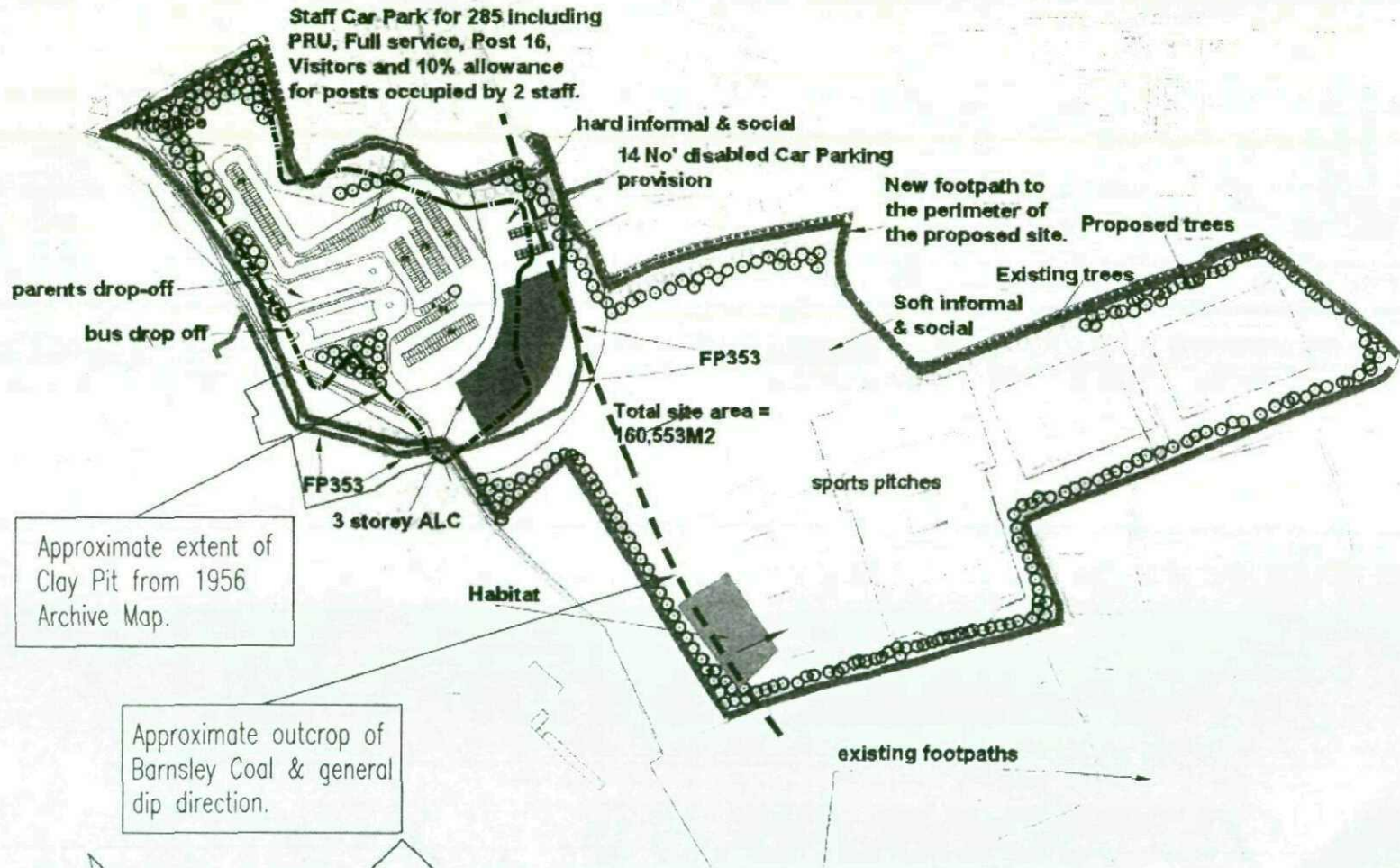


APPENDIX E

SKETCH LAYOUT OF PROPOSED DEVELOPMENT

NOTE: (Existing Footpaths)

- The main registered footpath ref: FP353 (highlighted on this plan) is to be extinguished. An alternative route is to be dedicated through the site in accordance with Public Rights Of Way consultation and approval. This 'dedicated' route is to be applied for in a separate Footpath Diversion Application and is to be detailed within the full planning submission for the site development
- The existing footpaths enclosed within the proposed site area that are classed as 'Non-Definite Routes' are to be relocated in accordance with the same footpath diversion application.



PROPOSED SITE LAYOUT

Project/Client
HOLGATE/KINGSTONE ALC, BARNSELEY
G. L. HEARN LTD

ARP ASSOCIATES
CHARTERED CONSULTING ENGINEERS
Northwest House • 5/6 Northwest Business Park
Savoy Hill • Leeds LS6 2QH
Telephone : 0113 245 8498 • Fax : 0113 244 3864
E-Mail : leeds@arpassociates.co.uk



Rev	By	Date	Issued for approval	Chk
1	MW	00.00.00		ARP

Scale	NTS	Drawn	MW
Date	JAN 09	Chk	ARP
Dir. No.	1045/01/FR.03	Rev	/

APPENDIX F

EXISTING SITE LAYOUT



Project **HOLGATE/KINGSTONE ALC, BARNSELY**
 Client **G. L. HEARN LTD**

Title **EXISTING LAYOUT**



ARP ASSOCIATES
 CHARTERED CONSULTING ENGINEERS

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Rev	By	Date	Amendment	
Date	JAN 09	Scale	1: 10,000 @ A3	
Drawn	MW	No	1045/01/FR.04	Rev
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